

REMARKS

The abstract and specification have been amended in order to correct grammatical and idiomatic errors contained therein. No new matter has been added.

In order to more particularly point out and distinctly claim the subject matter which Applicants regard as the invention, Claims 1, 2, 4 and 6-9 have been canceled and replaced by newly presented Claims 10-14. No new matter has been added.

Claims 1-5 and 7-9 have been rejected under 35 USC 102(b) as being anticipated by Kuroda. Claim 6 has been rejected under 35 USC 103(a) as being unpatentable over Kuroda in view of Nguyen. Applicants respectfully traverse these grounds of rejection and urge reconsideration in light of the following comments.

The present invention is directed to a paper machine contamination preventive agent comprising a modified silicone oil in which only a sidechain is substituted with an amino- or an epoxy-containing organic functional group. The paper machine contamination preventive agent of the present invention is also used in methods to prevent press-roll contamination, dryer-roll contamination, canvas contamination and canvas-roll contamination.

As discussed in the present specification, the modified silicone oil of the present invention conveys the intrinsic releaseability of a silicone oil and water-repellent properties onto the surface of the rolls or the like which enables foreign matter from transferring from a wet paper web to the surfaces of the rolls or the like. An improved property associated with the modified silicone oil of the present invention is its fixability. Although conventional silicone oils used in paper machines have good water-repellent and releaseability properties, they tend not to adhere to the surface that they are applied to and, therefore, are easily removed from these surfaces with the attendant loss of their

properties. The modified silicone oil of the present invention has a good adherence to the surface onto which it is applied and, therefore, is capable of providing the surface to which it is applied the advantageous properties associated with silicone oils. It is respectfully submitted that the presently claimed invention is patentably distinguishable over the prior art cited by the Examiner.

The Kuroda reference discloses a stain-proofing agent for preventing the adhesion of a powdery paper or pitch used in a paper-making dryer process. The stain-proofing agent is prepared by mixing a fluorine-based surfactant with an emulsion mixture containing a silicone oil emulsion and a blend of silicone oils. In the outstanding Office Action, the Examiner states that the silicone oil compounds are side-chain modified silicone oils and include dimethylpolysiloxane oil, polyester modified silicone oil and amino-modified silicone oil.

Example 2 of Kuroda is the closest specific disclosure to the presently claimed invention as it discloses Dow Corning Toray Silicone, Inc.'s oil SM8702, which is disclosed as being an amino denaturation silicone oil, being used in an oil emulsion. However, the "SM8702" silicone oil is a sidechain both-termini modification silicone oil emulsion as shown in Table 6 on page 12 of the present specification. In contrast thereto, the presently claimed modified silicone oils have a sidechain-substituted molecular structure as shown in Table 3 on page 10 of the present specification. Therefore, there is no specific disclosure of a sidechain-type modified silicone oil as required by the currently presented claims.

The Nguyen reference has been cited by the Examiner as disclosing a method of applying a silicone-containing oil as a contamination preventive agent to press rolls. However, like the previously discussed reference, this reference has no specific disclosure of a modified silicone oil falling within the scope of the present claims.

In order to further establish the unobviousness of the presently claimed invention, examples of the modified silicone oils according to the present invention and comparative silicone oils are presented on pages 19-34 of the present specification. As shown by the test data contained in the present specification, the sidechain-type modified silicone oils according to the present claims clearly have superior properties. This is completely unexpected in light of the prior art cited by the Examiner and further establishes the patentability of the presently claimed invention thereover.

The Examiner is respectfully requested to reconsider the present application and to pass it to issue.

Respectfully submitted,


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Encl: Replacement Abstract
Clean Substitute Specification
Marked-Up Substitute Specification
Postal Card

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